

that period in order to learn whether any insurance would have been received had a policy been secured. It was found that very little rain fell. There was rain on two afternoons, but scarcely any at night during the carnival hours for which insurance would have been written. However, the grounds were wet and the sky overcast, and these conditions kept away large numbers of people.

In order to learn the averages through a period of years the rainfall records at Ludington from May 1 to September 30, in the 10 years from 1915 to 1924, inclusive, have been examined. The results are given in Table 1. All cases are counted, both afternoon and night, when during the hours from 2 to 5 p. m. or 6 to 9 p. m., a total of 0.01 or more fell and would apparently

TABLE 1.—Number of times at Ludington, Mich., from May 1 to September 30, in the years 1915 to 1924, inclusive, when 0.10 or more of rain fell between 2 p. m. and 5 p. m., and number when 0.01 to 0.09, inclusive, fell

Year	0.10 or more	0.01 to 0.09, inclusive.
1915.....	9	21
1916.....	14	19
1917.....	9	20
1918.....	5	19
1919.....	7	19
1920.....	9	8
1921.....	4	10
1922.....	10	8
1923.....	6	8
1924.....	7	20
Total.....	80	152

have seriously affected the program or attendance. The first column gives the number of times in each year insurance would have been received, the second column the number of times none would have been received, since the rainfall was less than 0.10 and not less than 0.01.

It is seen that the latter outnumber the former almost two to one. But the facts are even worse than the table indicates. There are times when light rain amounts to only a trace, or when thunderstorms threaten but do not actually strike the station; on such occasions the attendance may be badly affected. The number of such times averages about four per year, which added to the total makes the nonbenefiting instances decidedly more than double the benefiting.

The results would be somewhat more favorable were the policies to cover more than three hours. The fact that the period is made short to keep down the cost, without the probabilities being considered that the specified total of rain may not be reached, indicates misunderstanding on the part of many. A four-hour period would be preferable though costing considerably more. The whole day might be still better.

There is no doubt a rainfall of over 0.10 may be more damaging than a lighter one, and probably should have heavier insurance. But there should be some protection against the numerous lighter rains when events would also be interfered with. Probably about half as much for the lighter rains would be a fair amount.¹

¹ Doubtless the question of the greater frequency of light rains would enter into the rate problem. As the writer points out, the lighter rains are about twice as frequent as those over 0.10 inch.—B. M. V.

NOTES, ABSTRACTS, AND REVIEWS

PROF. H. H. HILDEBRANDSSON, 1838-1925

Prof. Hugo Hildebrandsson, the distinguished Swedish meteorologist, died at Upsala, July 29, 1925. On August 19 he would have completed his eighty-seventh year. His death means something more than the passing of one who was active in contributions to meteorology throughout a long life. Prof. Hildebrandsson was the last survivor of the group of men who assembled at Leipzig in 1869 and founded the International Meteorological Organization. He was a contemporary and associate of such famous pioneers as Buchan, Buys Ballot, Hann, Jelinek, Neumayer, Scott, and Wild. With him, therefore, a great generation of meteorologists passes into history.

Hildebrandsson was born at Stockholm in 1838, and took his degree as doctor of philosophy at the University of Upsala in 1866. In 1878 he was appointed professor of meteorology at the same university and director of its meteorological observatory, a position which he held until his retirement in 1906. He was a member of the International Meteorological Committee for many years and served as its secretary from 1903 to 1906. He re-

ceived the Symons medal of the Royal Meteorological Society in 1920.

While his scientific work in meteorology covered a wide range, he was particularly identified with the study of clouds and of atmospheric circulation. In these studies he was intimately associated with Teisserenc de Bort. He was instrumental in preparing the International Cloud Atlas, in organizing the international cloud observations in 1896-97, and in presenting the results of these epoch-making observations. He published jointly with Teisserenc de Bort a monumental history and digest of studies in dynamic meteorology, "*Les Bases de la Météorologie Dynamique*," one of the most striking features of which is its facsimile reproductions of early meteorological documents. The subject that interested him above all others was the general circulation of the atmosphere. Probably no other meteorologist has devoted so much industry to collecting and sifting the data bearing upon this subject, and few have done so much to elucidate it.—C. F. T.